

**IN THE CLAIMS**

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A high-voltage supply device for an electric filters, ~~having comprising:~~

       high-voltage devices ~~(1)~~, ~~which are arranged close to the electric filter, and by means of which~~ adapted to supply the electric filter ~~can be supplied with an electrical high voltage;~~

       measuring heads ~~(2, 3)~~, ~~which are associated with the high-voltage devices (1), and by means of which~~ adapted to detect and transmit at least one of measured values and, if necessary, diagnosis data from the high-voltage devices (1) can be detected and transmitted; and

       control units ~~(6)~~, ~~which are each respectively associated with a high-voltage device (1), and by means of which~~ each adapted to control and regulate the associated high-voltage devices (1) associated with them can be controlled and regulated depending on requirements and taking into consideration the at least one of measured values and, if necessary, diagnosis data detected ~~mined~~ by the measuring heads ~~(2, 3)~~, wherein characterized in that the measuring heads, ~~(2, 3)~~ on the high-voltage device side, each include have an optical waveguide interface ~~(4)~~, ~~in that~~ wherein the measuring heads, ~~(2, 3)~~ on the high-voltage device side, are connected via their optical waveguide interfaces ~~(4)~~ in a first local optical waveguide network ~~(5)~~, ~~in that~~ wherein the control units ~~(6)~~ are connected to one another by ~~means of a~~ second local optical waveguide network ~~(7)~~, and ~~in that~~ wherein the local optical waveguide network ~~(5)~~, on the high-voltage device side, and the local optical waveguide network ~~(7)~~, on

the control unit side, are coupled to one another by ~~means of~~  
an optical waveguide connection ~~(8)~~.

2. (Currently Amended) The high-voltage supply device for electric filters as claimed in claim 1, ~~in which~~ wherein at least one of the local optical waveguide network (5) on the high-voltage device side, and/or the local optical waveguide network (7) on the control unit side, has/have includes a ring topology.

3. (Currently Amended) The high-voltage supply device for electric filters as claimed in claim 1, ~~in which~~ wherein at least one of the local optical waveguide network (5) on the high-voltage device side, and/or the local optical waveguide network (7) on the control unit side, includes ~~has/have~~ a star topology.

4. (Currently Amended) The high-voltage supply device for electric filters as claimed in ~~one of claims 1 to 3, in which~~ wherein the at least one of a ring and/or star topologies, forming the local optical waveguide networks (5, 7) are, is of redundant design.

5. (Currently Amended) The high-voltage supply device for electric filters as claimed in ~~one of claims 1 to 4, in which~~ claim 1, wherein the optical waveguides of the local optical waveguide networks (5, 7) are plastic optical waveguides ~~which can be prefabricated~~.

6. (Currently Amended) The high-voltage supply device for electric filters as claimed in ~~one of claims 1 to 5, in which~~ claim 1, wherein the optical waveguide connection (8) between the two local optical waveguide networks (5, 7) is of redundant design.

7. (Currently Amended) The high-voltage supply device for electric filters as claimed in ~~one of claims 1 to 6, in which~~ claim 1, wherein the optical waveguides of the optical waveguide connection are in the form of at least one of glass or and PCF optical waveguides.

8. (Currently Amended) The high-voltage supply device for electric filters as claimed in ~~one of claims 1 to 7, in which~~ claim 1, wherein the optical waveguide connection ~~(8)~~ is in the form of a sheathed optical waveguide cable, ~~for example in the form of a CUPOFLEX+ cable.~~

9. (Currently Amended) The high-voltage supply device for electric filters as claimed in ~~one of claims 1 to 8, in which~~ claim 1, wherein standard protocols, for example CAN, PROFIBUS, TCP/IP protocols or the like, may be used as the transmission protocol between the measuring heads ~~(2, 3)~~ and the control units ~~(6)~~.

10. (New) The high-voltage supply device for electric filters as claimed in claim 2, wherein the ring topology, forming the local optical waveguide networks, is of redundant design.

11. (New) The high-voltage supply device for electric filters as claimed in claim 3, wherein the star topology, forming the local optical waveguide networks, is of redundant design.

12. (New) The high-voltage supply device for electric filters as claimed in claim 1, wherein the optical waveguides of the local optical waveguide networks are prefabricated plastic optical waveguides.

13. (New) The high-voltage supply device for electric filters as claimed in claim 2, wherein the optical waveguide

connection between the two local optical waveguide networks is of redundant design.

14. (New) The high-voltage supply device for electric filters as claimed in claim 3, wherein the optical waveguide connection between the two local optical waveguide networks is of redundant design.

15. (New) The high-voltage supply device for electric filters as claimed in claim 2, wherein the optical waveguides of the optical waveguide connection are in the form of at least one of glass and PCF optical waveguides.

16. (New) The high-voltage supply device for electric filters as claimed in claim 3, wherein the optical waveguides of the optical waveguide connection are in the form of at least one of glass and PCF optical waveguides.

17. (New) The high-voltage supply device for electric filters as claimed in claim 1, wherein the optical waveguide connection is in the form of a CUPOFLEX+ cable.

18. (New) The high-voltage supply device for electric filters as claimed in claim 9, wherein standard protocols include at least one of CAN, PROFIBUS, and TCP/IP protocols.